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NEW VASCULAR PLANT RECORDS FOR FAR SOUTH TEXAS

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ABSTRACT

Coccoloba uvifera (Polygonaceae), sea grape, is reported for the first time as adventive in Texas, in the Gulf Prairies and Marshes vegetational region of Cameron County. It is used as an ornamental in the more southern part of Texas Gulf Coast. *Ophioglossum engelmannii* (Ophioglossaceae), limestone adder's tongue, is reported from Boca Chica, Cameron County, also in the Gulf Prairies and Marshes region. This location is approximately 365 km south of the previously known southern station in Texas (Wilson County) and 320 km northeast of the northwesternmost known Mexican occurrence in central Nuevo Leon.

The following vascular plant records are a result of collections made between November 18 and 20, 2013, in the Gulf Prairies and Marshes region of coastal Cameron County, Texas.

Coccoloba uvifera (L.) L. (Polygonaceae), Sea-grape. Figure 1.

Voucher specimens. **TEXAS**. Cameron Co.: 0.3 mi S of Jct of Hwy 100 and Padre Blvd on Padre Blvd, W side of Padre Blvd. in undeveloped natural coastal prairie on edge of black mangrove dominated tidal flats, 20 Nov 2013, *Singhurst 20463* (BAYLU); 0.1 mi ENE of Jct of Wallace L. Reed Road and Padre Blvd in undeveloped natural coastal prairie on edge of deflational wetland and prairie transition, 20 Nov 2013, *Singhurst 20464* (BAYLU).

Sea grape is native to southern North America (including Mexico), South America, and the West Indies. Within the USA, the species is considered native to the coastal areas of central and southern Florida and coastal Mississippi (Freeman 2005; USDA, URCS 2013). Although used as an ornamental in Gulf coastal Texas, the species has not been reported as native or naturalized in the Texas (Correll & Johnston 1970; Hatch et al 1990; Turner et al 2003). Jones et al (1997) included the species in the checklist of the vascular plants of Texas but noted that it is cultivated. It is probable that the adventive plants cited below originated from ornamental specimens in the South Padre Island area. But it cannot be discounted that the Texas specimens may have originated from naturally occurring populations in adjacent Tamaulipas, Mexico, where the species was reported by Standley (1922). Regardless of origin, the species may now be reported as naturalized within the state. The small size of the plants (see Fig. 1) discloses that the introduction is fairly recent, perhaps suggesting that plants of the species are but short-lived in the state.

Associated vegetation at site *20463* included *Schizachyrium littorale, Sophora tomentosa, Iva frutescens, Spartina spartinae, Solidago sempervirens, Borrichia frutescens, Andropogon glomeratus, Palafoxia texana,* and *Avicennia germinans*. Common associates (at site *20464*) included

Figure 1. *Coccoloba uvifera (Singhurst 20463*, BAYLU). In the background is the lower Laguna Madre. Photo by Singhurst.

Schizachyrium littorale, Conoclinium betonicifolium, Paspalum monostachyum, Spartina spartinae, Solidago sempervirens, Andropogon glomeratus, Baptisia sp., and *Eleocharis* spp.

The species appears to have potential to spread northward because of more favorable conditions present in that direction (increased frost-free period and greater precipitation, see Gould 1962, p. 5) or from spread of cultivated stock. At this time, *Coccoloba* does not seem to present serious invasive potential.

Ophioglossum engelmannii Prantl (Ophioglossaceae), Limestone adder's tongue. Figure 2.

Voucher specimen. **TEXAS**. Cameron Co.: Boca Chica State Park, 0.1 mi N of jct of Eichorn Rd and Boca Chica Blvd (Hwy 4) on Eichorn Rd to entrance of state park, then 0.9 mi E on road that heads to South Bay and lies adjacent to South Bay, then 30 mi SE from bay edge, ca. 4 m elevation, 18 Nov 2013, *Singhurst 20462* (BAYLU).

The species was found at the base of a loma shrub thicket beneath clumps of *Aristida purpurea* var. *nealleyi, Spartina spartinae, Schizachyrium littorale, Bothriochloa laguroides, Cenchrus spinifex, Oxalis dichondrifolia,* and *Rhynchosia americana*. This fern occurred at 4 m above mean sea level on Point Isabel clay loam soils, which are deep, well drained, and calcareous.

This record was unexpected, particularly in view of Wherry's (1927) description of this region of Cameron County as "a fernless area." In fairness to Wherry, his statement appeared mainly

directed toward the Polypodiaceae (sensu lato of that time) and not the fern allies (i.e., Equisetaceae) or what he considered non-typical ferns (e.g., Marsileaceae, Azollaceae). Nonetheless, the only fern he observed was *Marsilea vestita*. This view appears supported by Turner et al. (2003), who map only three species of ferns or fern allies in Cameron County, one species each for the three mentioned families.

Ophioglossum engelmannii is readily distinguishable by its fleshy, dull green sterile fronds with apiculate points (Palmer 1919) and principal veins of sterile frond forming primary areoles in which are included numerous veinlets forming secondary areoles (Correll & Johnston 1970). The plants are said to normally occur in thin, often clayey, soil over limestone (Clausen 1938). The small number of taxonomic characters, described as "trivial details" by Clausen 1938, seems partly responsible for the difficulty of circumscription of species in the genus and apparently may complicate specific recognition. Thieret (1980) reported that *O. engelmannii* has a very distinctive odor by which it can be identified even after 5 years of storage. The odor is described in the key to species as malodorous.

Figure 2. *Ophioglossum engelmannii* (*Singhurst 20462*, BAYLU). Photo by Singhurst.

The Cameron County record is notable for extending the known distribution of the species southward in the state and in substantially revising the minimum elevation that the species is known to occur. It is the southernmost record of the species in the state, being approximately 365 km south of the nearest known Texas location, Suterland [Sutherland] Springs, Wilson County (*H.B. Parks s.n.*, TEX), which is located at the southern limits of the Post Oak Savannahs. It also appears to be the only record of *Ophioglossum engelmannii* in the Gulf Marshes and Prairies vegetational region south

of Harris County (specimens cited in Correll 1956, where locations are given to county only), about 470 km to the north. The species is mapped as present in the South Texas Plains and the southern portion of the Gulf Prairies and Marshes vegetation regions by Wagner and Wagner (1993) but not in Turner et al. (2003). South of Texas, the species is [presumably] in limestone regions at elevations from 1000-2650 m (Mickel and Smith 2004). The Mexican record nearest to the Cameron County record is this: **Nuevo Leon**. Mpio. Galeana: Rancho Aguililla, 1850 m, *Hinton et al. 25489* (MO, Tropicos 2013), which is about 320 km southwest of Boca Chica, Texas. Concerning elevation, *Singhurst 20462* occurred at 4 m, which is below the range of elevations (50-1000) reported in Wagner and Wagner (1993) and the 1000-2650 m elevations of Mickel and Smith (2004). More specific information about the distribution of the species may be found in the references cited.

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